STORMWATER

The FY 2011-15 Capital Improvement Program addresses flooding and erosion issues by reconstructing or replacing inadequate culverts and crossings.


city of
greenville

BENNETT, MOHAWK, AND CHICK SPRINGS CROSSINGS

Department:	PUBLIC WORKS	Ranking:	N/A
Project Status:	CONTINUATION	Strategic Goal:	SUSTAINABLE CITY
Start/Finish Dates:	JULY 2001 – JUN 2011	Comp. Plan Principle:	ENHANCE AND PROTECT RESIDENTIAL AREAS

Project Description:

This project will replace inadequate crossings at the following locations:

1. Bennett Street: Remove existing 10' X 7' culvert and replace with two 8' X 8' culverts.
2. Mohawk Drive: Remove existing 11' X 7' arch pipe and replace with a 24' X 8' concrete span.
3. Chick Springs Road: Construct one 10' X 10' box culvert adjacent to the existing two 10' X 10' box culverts.

Project Justification (Including Relationship to Strategic Goals, Comprehensive Plan, etc.):

There are residential homes that flood due to undersized crossings at Mohawk Drive, Bennett Street, and Chick Springs Road. Flooding and overtopping on Chick Springs Road during storm events create a safety hazard and inconvenience the public. This project is consistent with the Strategic Goals of a sustainable city and a mobile city This project is consistent with the Comprehensive Plan principle to enhance and protect residential areas.

Method for Estimating Cost:

Consultant estimate adjusted for inflation.

Project Status (As of January 1, 2010):

Construction is underway.

PROJECT ITEMS	FUNDING TO-DATE	FY 10/11 COST	FY 11/12 COST	FY 12/13 COST	FY 13/14 COST	FY 14/15 COST	TOTAL PROJECT COST
Planning/Design	$0	$0	$0	$0	$0	$0	$0
Site Acquisition Costs	$0	$0	$0	$0	$0	$0	$0
Improvements	$1,958,301	$0	$0	$0	$0	$0	$1,958,301
Equipment	$0	$0	$0	$0	$0	$0	$0
Management	$80,850	$0	$0	$0	$0	$0	$80,850
TOTAL PROJECT COST	**$2,039,151**	**$0**	**$0**	**$0**	**$0**	**$0**	**$2,039,151**
PROJECT FUNDING SOURCES (LIST)	**FUNDING TO-DATE**	**FY 10/11 EST. FUNDS**	**FY 11/12 EST. FUNDS**	**FY 12/13 EST. FUNDS**	**FY 13/14 EST. FUNDS**	**FY 14/15 EST. FUNDS**	**TOTAL PROJECT FUNDING**
Stormwater Revenue Bond - 2001	$73,026	$0	$0	$0	$0	$0	$73,026
Stormwater Fund	$1,966,125	$0	$0	$0	$0	$0	$1,966,125
TOTAL PROJECT FUNDING	**$2,039,151**	**$0**	**$0**	**$0**	**$0**	**$0**	**$2,039,151**
OPERATIONAL COSTS							
Operating Impact		$0	$0	$0	$0	$0	$0
Cumulative Operating Impact		$0	$0	$0	$0	$0	$0
FTEs Added		0.00	0.00	0.00	0.00	0.00	0.00
Cumulative FTEs Added		0.00	0.00	0.00	0.00	0.00	0.00

HENDERSON BASIN

Department:	PUBLIC WORKS	Ranking:	GROUP A - CRITICAL PRIORITY
Project Status:	CONTINUATION	Strategic Goal:	SUSTAINABLE CITY
Start/Finish Dates:	JUN 2007 – JUN 2011	Comp. Plan Principle:	ENHANCE AND PROTECT RESIDENTIAL AREAS

Project Description:

This project will replace inadequate culvert crossings at Halidon Road, Parkins Mill Road, Cleveland Street, Wembley Road, and two crossings at Henderson Road. The Halidon Road portion of the project was funded in FY 2007-08.

Project Justification (Including Relationship to Strategic Goals, Comprehensive Plan, etc.):

Presently, flooding occurs at the confluence of the main stream and Shelburne Tributary, Craigwood Court, Seabrook Court, and Wembley Drive. Erosion occurs near Fontaine Road, Craigwood Court, Stonehaven Drive on the North Stonehaven Tributary, Shelburne Road, and Carolina Avenue. There are residences within this area that have had repetitive flood insurance claims. This project is consistent with the Strategic Goal of a sustainable city. This project is consistent with the Comprehensive Plan principle to enhance and protect residential areas.

Method for Estimating Cost:

Engineering estimate adjusted for inflation.

Project Status (As of January 1, 2010):

The design for Halidon Road and Parkins Mill Road has been received by the City for review as well as the study for Henderson Basin. City staff is in the process of reviewing the design and study.

PROJECT ITEMS	FUNDING TO-DATE	FY 10/11 COST	FY 11/12 COST	FY 12/13 COST	FY 13/14 COST	FY 14/15 COST	TOTAL PROJECT COST
Planning/Design	$170,000	$0	$0	$0	$0	$0	$170,000
Site Acquisition Costs	$0	$25,000	$0	$0	$0	$0	$25,000
Improvements	$1,169,497	$5,414,068	$0	$0	$0	$0	$6,583,565
Equipment	$0	$0	$0	$0	$0	$0	$0
Management	$0	$320,932	$0	$0	$0	$0	$320,932
TOTAL PROJECT COST	**$1,339,497**	**$5,760,000**	**$0**	**$0**	**$0**	**$0**	**$7,099,497**
PROJECT FUNDING SOURCES (LIST)	**FUNDING TO-DATE**	**FY 10/11 EST. FUNDS**	**FY 11/12 EST. FUNDS**	**FY 12/13 EST. FUNDS**	**FY 13/14 EST. FUNDS**	**FY 14/15 EST. FUNDS**	**TOTAL PROJECT FUNDING**
Stormwater Revenue Bond - 2001	$61,000	$0	$0	$0	$0	$0	$61,000
Stormwater Revenue Bond - 2011	$0	$3,450,000	$0	$0	$0	$0	$3,450,000
Stormwater Fund	$1,278,497	$2,310,000	$0	$0	$0	$0	$3,588,497
TOTAL PROJECT FUNDING	**$1,339,497**	**$5,760,000**	**$0**	**$0**	**$0**	**$0**	**$7,099,497**
OPERATIONAL COSTS							
Operating Impact		$0	$0	$0	$0	$0	$0
Cumulative Operating Impact		$0	$0	$0	$0	$0	$0
FTEs Added		0.00	0.00	0.00	0.00	0.00	0.00
Cumulative FTEs Added		0.00	0.00	0.00	0.00	0.00	0.00

PINEHURST AND WINDSOR CROSSINGS

Department:	PUBLIC WORKS	Ranking:	GROUP C - MEDIUM PRIORITY
Project Status:	PLANNED/PROGRAMMED	Strategic Goal:	SUSTAINABLE CITY
Start/Finish Dates:	JULY 2005 JUN 2012	Comp. Plan Principle:	ENHANCE AND PROTECT RESIDENTIAL AREAS

Project Description:

This project will replace undersized culvert crossings at Pinehurst Drive and Windsor Drive. Due to upstream development, the existing culvert size became insufficient to handle the increasing stormwater flow. To mitigate this problem, the project will install a new arch culvert (10' x 5.5' x 80') at Pinehurst Drive and a new arch culvert (12' x 5.5' x 80') at Windsor Drive.

Project Justification (Including Relationship to Strategic Goals, Comprehensive Plan, etc.):

This project will reduce flooding in the area, prevent road overtopping, and improve the bank's stability. The Richland Creek tributary, which crosses under Pinehurst Drive and Windsor Drive, carries flow from approximately 350 acres. The existing culverts have minimal capacity to carry heavy storm flows in the creek and are prone to blockage.

The proposed upgrades will significantly improve the hydraulic capacity at the crossing, reduce regular maintenance, and would benefit private property owners directly upstream from significant reductions in the backwater flood profile. This project is consistent with the Strategic Goal of a sustainable city. This project is consistent with the Comprehensive Plan principle to enhance and protect residential areas.

Method for Estimating Cost:

Estimate based on projects of similar size and scope.

Project Status (As of January 1, 2010):

Work has yet to commence, as funding will become available FY 2010-11.

PROJECT ITEMS	FUNDING TO-DATE	FY 10/11 COST	FY 11/12 COST	FY 12/13 COST	FY 13/14 COST	FY 14/15 COST	TOTAL PROJECT COST
Planning/Design	$0	$40,000	$0	$0	$0	$0	$40,000
Site Acquisition Costs	$0	$0	$30,000	$0	$0	$0	$30,000
Improvements	$0	$0	$1,200,000	$0	$0	$0	$1,200,000
Equipment	$0	$0	$0	$0	$0	$0	$0
Management	$0	$0	$60,000	$0	$0	$0	$60,000
TOTAL PROJECT COST	**$0**	**$40,000**	**$1,290,000**	**$0**	**$0**	**$0**	**$1,330,000**
PROJECT FUNDING SOURCES (LIST)	**FUNDING TO-DATE**	**FY 10/11 EST. FUNDS**	**FY 11/12 EST. FUNDS**	**FY 12/13 EST. FUNDS**	**FY 13/14 EST. FUNDS**	**FY 14/15 EST. FUNDS**	**TOTAL PROJECT FUNDING**
Stormwater Fund	$0	$40,000	$1,290,000				$1,330,000
TOTAL PROJECT FUNDING	**$0**	**$40,000**	**$1,290,000**	**$0**	**$0**	**$0**	**$1,330,000**
OPERATIONAL COSTS							
Operating Impact		$0	$0	$0	$0	$0	$0
Cumulative Operating Impact		$0	$0	$0	$0	$0	$0
FTEs Added		0.00	0.00	0.00	0.00	0.00	0.00
Cumulative FTEs Added		0.00	0.00	0.00	0.00	0.00	0.00

WESTVIEW AVENUE

Department:	PUBLIC WORKS	Ranking:	N/A
Project Status:	CONTINUATION	Strategic Goal:	SUSTAINABLE CITY
Start/Finish Dates:	JULY 2002 – JUN 2011	Comp. Plan Principle:	ENHANCE AND PROTECT RESIDENTIAL AREAS

Project Description:

The project will replace an inadequate crossing at Westview Avenue by installing a new 15' x 5.5' x 80' arch culvert.

Project Justification (Including Relationship to Strategic Goals, Comprehensive Plan, etc.):

The existing culvert under Westview Avenue is unable to handle the stormwater runoff during heavy storms. Residential properties along Westview experience flooding because water backs up at the crossing.

This project is consistent with the Strategic Goal of a sustainable city. This project is consistent with the Comprehensive Plan principle to enhance and protect residential areas.

Method for Estimating Cost:

Consultant estimate adjusted for inflation.

Project Status (As of January 1, 2010):

Design is complete.

PROJECT ITEMS	FUNDING TO-DATE	FY 10/11 COST	FY 11/12 COST	FY 12/13 COST	FY 13/14 COST	FY 14/15 COST	TOTAL PROJECT COST
Planning/Design	$3,200	$0	$0	$0	$0	$0	$3,200
Site Acquisition Costs	$0	$0	$0	$0	$0	$0	$0
Improvements	$591,071	$0	$0	$0	$0	$0	$591,071
Equipment		$0	$0	$0	$0	$0	$0
Management	$29,554	$0	$0	$0	$0	$0	$29,554
TOTAL PROJECT COST	**$623,825**	**$0**	**$0**	**$0**	**$0**	**$0**	**$623,825**
PROJECT FUNDING SOURCES (LIST)	**FUNDING TO-DATE**	**FY 10/11 EST. FUNDS**	**FY 11/12 EST. FUNDS**	**FY 12/13 EST. FUNDS**	**FY 13/14 EST. FUNDS**	**FY 14/15 EST. FUNDS**	**TOTAL PROJECT FUNDING**
Stormwater Fund	$620,680	$0	$0	$0	$0	$0	$620,680
Stormwater Revenue Bond - 2001	$3,145	$0	$0	$0	$0	$0	$3,145
TOTAL PROJECT FUNDING	**$623,825**	**$0**	**$0**	**$0**	**$0**	**$0**	**$623,825**
OPERATIONAL COSTS							
Operating Impact		$0	$0	$0	$0	$0	$0
Cumulative Operating Impact		$0	$0	$0	$0	$0	$0
FTEs Added		0.00	0.00	0.00	0.00	0.00	0.00
Cumulative FTEs Added		0.00	0.00	0.00	0.00	0.00	0.00

PETTIGRU STREET IMPROVEMENTS

Department:	PUBLIC WORKS	Ranking:	GROUP C - MEDIUM PRIORITY
Project Status:	PLANNED/PROGRAMMED	Strategic Goal:	SUSTAINABLE CITY
Start/Finish Dates:	JULY 2011 / JUN 2012	Comp. Plan Principle:	ENCOURAGE WATER CONSERVATION AND WATER QUALITY

Project Description:

This project upgrades stormwater infrastructure in Pettigru Street. This project involves the addition of approximately 850 linear feet of new stormwater pipe and associated inlet structures. Also included is the replacement of approximately 300 feet of sanitary sewer line and one manhole. Curb, gutter, and pavement are to be upgraded in the affected area to coordinate with SCDOT activities at the end of Pettigru to improve traffic and parking. Additionally, the eroded bank along Richland Creek needs to be stabilized.

Project Justification (Including Relationship to Strategic Goals, Comprehensive Plan, etc.):

This project is located in the Historic Pettigru District that abuts Cleveland Park and Richland Creek. The Pettigru District has been developed into a light business district, and associated business parking has caused a concentration of stormwater runoff that channels into the project area, overrunning the existing infrastructure. Additionally, stormwater flow from this area into Cleveland Park and Richland Creek is causing significant erosion problems. In order to affect a permanent solution to the above issues and to minimize runoff through the Upstate Garden and Cleveland Park, the stormwater runoff needs to be captured and diverted to existing stormwater infrastructure at the end of Pettigru Street. This project is consistent with the Strategic Goal of a sustainable city. This project is consistent with the Comprehensive Plan principle to encourage water conservation and water quality.

Method for Estimating Cost:

Informal engineering estimate adjusted for inflation in future years.

Project Status (As of January 1, 2010):

Preliminary designs have been completed that outline the scope of this project.

PROJECT ITEMS	FUNDING TO-DATE	FY 10/11 COST	FY 11/12 COST	FY 12/13 COST	FY 13/14 COST	FY 14/15 COST	TOTAL PROJECT COST
Planning/Design	$0	$0	$0	$0	$0	$0	$0
Site Acquisition Costs	$0	$0	$379,250	$0	$0	$0	$379,250
Improvements	$0	$0	$0	$0	$0	$0	$0
Equipment	$0	$0	$0	$0	$0	$0	$0
Management	$0	$0	$16,713	$0	$0	$0	$16,713
TOTAL PROJECT COST	**$0**	**$0**	**$395,963**	**$0**	**$0**	**$0**	**$395,963**
PROJECT FUNDING SOURCES (LIST)	**FUNDING TO-DATE**	**FY 10/11 EST. FUNDS**	**FY 11/12 EST. FUNDS**	**FY 12/13 EST. FUNDS**	**FY 13/14 EST. FUNDS**	**FY 14/15 EST. FUNDS**	**TOTAL PROJECT FUNDING**
Stormwater Fund	$0	$0	$395,963	$0	$0	$0	$395,963
TOTAL PROJECT FUNDING	**$0**	**$0**	**$395,963**	**$0**	**$0**	**$0**	**$395,963**
OPERATIONAL COSTS							
Operating Impact		$0	$0	$0	$0	$0	$0
Cumulative Operating Impact		$0	$0	$0	$0	$0	$0
FTEs Added		0.00	0.00	0.00	0.00	0.00	0.00
Cumulative FTEs Added		0.00	0.00	0.00	0.00	0.00	0.00

FAIRFOREST WAY BASIN

Department:	PUBLIC WORKS	Ranking:	GROUP B - HIGH PRIORITY
Project Status:	NEW PROJECT	Strategic Goal:	SUSTAINABLE CITY
Start/Finish Dates:	JAN 2011 – JAN 2016	Comp. Plan Principle:	ENCOURAGE WATER CONSERVATION AND WATER QUALITY

Project Description:

This project involves performing a detailed watershed analysis and flood plain mapping for the Fairforest Way Basin. This involves, but is not limited to: hydrologic and hydraulic analysis, regional detention, and erosion problem areas.

Project Justification (Including Relationship to Strategic Goals, Comprehensive Plan, etc.):

As a regulated Small Municipal Separate Storm Sewer System (MS4) and as stipulated in the City's Stormwater Management Plan, the City is required to perform a detailed watershed analysis and flood plain mapping for the all of stormwater basins within the City. The Stormwater Management Plan is a requirement of the City's NPDES General Permit through SCDHEC. This project is consistent with the Strategic Goal of a sustainable city This project is consistent with the Comprehensive Plan principle to encourage water conservation and water quality.

Method for Estimating Cost:

Engineering estimate based on similar projects.

Project Status (As of January 1, 2010):

This is a new project.

PROJECT ITEMS	FUNDING TO-DATE	FY 10/11 COST	FY 11/12 COST	FY 12/13 COST	FY 13/14 COST	FY 14/15 COST	TOTAL PROJECT COST
Planning/Design	$0	$150,000	$0	$0	$0	$0	$150,000
Site Acquisition Costs	$0	$0	$0	$0	$0	$0	$0
Improvements	$0	$0	$0	$0	$0	$0	$0
Equipment	$0	$0	$0	$0	$0	$0	$0
Management	$0	$0	$0	$0	$0	$0	$0
TOTAL PROJECT COST	**$0**	**$150,000**	**$0**	**$0**	**$0**	**$0**	**$150,000**
PROJECT FUNDING SOURCES (LIST)	**FUNDING TO-DATE**	**FY 10/11 EST. FUNDS**	**FY 11/12 EST. FUNDS**	**FY 12/13 EST. FUNDS**	**FY 13/14 EST. FUNDS**	**FY 14/15 EST. FUNDS**	**TOTAL PROJECT FUNDING**
Stormwater Fund	$0	$150,000	$0	$0	$0	$0	$150,000
TOTAL PROJECT FUNDING	**$0**	**$150,000**	**$0**	**$0**	**$0**	**$0**	**$150,000**
OPERATIONAL COSTS							
Operating Impact		$0	$0	$0	$0	$0	$0
Cumulative Operating Impact		$0	$0	$0	$0	$0	$0
FTEs Added		0.00	0.00	0.00	0.00	0.00	0.00
Cumulative FTEs Added		0.00	0.00	0.00	0.00	0.00	0.00

WHITE OAK BASIN PHASE II

Department:	PUBLIC WORKS	Ranking:	GROUP C - MEDIUM PRIORITY
Project Status:	NEW PROJECT	Strategic Goal:	SUSTAINABLE CITY
Start/Finish Dates:	JAN 2011 – JAN 2015	Comp. Plan Principle:	ENCOURAGE WATER CONSERVATION AND WATER QUALITY

Project Description:

This project involves performing a detailed watershed analysis and flood plain mapping for the White Oak Basin. This involves, but is not limited to: hydrologic and hydraulic analysis, regional detention, and work on erosion problem areas.

Project Justification (Including Relationship to Strategic Goals, Comprehensive Plan, etc.):

As a regulated Small Municipal Separate Storm Sewer System (MS4) and stipulated in the City's Stormwater Management Plan, the City is required to perform a detailed watershed analysis and floodplain mapping for all of stormwater basins within the City. The Stormwater Management Plan is a requirement of the City's NPDES General Permit through SCDHEC. This project is consistent with the Strategic Goal of a sustainable city. It is also consistent Comprehensive Plan principle to encourage water conservation and water quality.

Method for Estimating Cost:

Engineering estimate based on similar projects.

Project Status (As of January 1, 2010):

This is a new project.

PROJECT ITEMS	FUNDING TO-DATE	FY 10/11 COST	FY 11/12 COST	FY 12/13 COST	FY 13/14 COST	FY 14/15 COST	TOTAL PROJECT COST
Planning/Design	$0	$60,000	$60,000	$0	$0	$0	$120,000
Site Acquisition Costs	$0	$0	$0	$0	$0	$0	$0
Improvements	$0	$0	$0	$0	$0	$0	$0
Equipment	$0	$0	$0	$0	$0	$0	$0
Management	$0	$0	$0	$0	$0	$0	$0
TOTAL PROJECT COST	**$0**	**$60,000**	**$60,000**	**$0**	**$0**	**$0**	**$120,000**
PROJECT FUNDING SOURCES (LIST)	**FUNDING TO-DATE**	**FY 10/11 EST. FUNDS**	**FY 11/12 EST. FUNDS**	**FY 12/13 EST. FUNDS**	**FY 13/14 EST. FUNDS**	**FY 14/15 EST. FUNDS**	**TOTAL PROJECT FUNDING**
Stormwater Fund	$0	$60,000	$60,000	$0	$0	$0	$120,000
TOTAL PROJECT FUNDING	**$0**	**$60,000**	**$60,000**	**$0**	**$0**	**$0**	**$120,000**
OPERATIONAL COSTS							
Operating Impact		$0	$0	$0	$0	$0	$0
Cumulative Operating Impact		$0	$0	$0	$0	$0	$0
FTEs Added		0.00	0.00	0.00	0.00	0.00	0.00
Cumulative FTEs Added		0.00	0.00	0.00	0.00	0.00	0.00


city of
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